Work Order ID 100404  April-22-13 1:03:37 PM								Page 1				
Revision ID:	D3953-2	21 ng Bracket			Accept	*N900	040	100	)* s	etup Sta	1	IS1* IS2*
	4/22/13	Start Qt	y: 20.00 ty: 20.00	*20* *20*		Cust Item	ID:					
Approvals:		s Plan: <u>ખ</u>					ate:		R		op	JR1* JR2*
Sequence ID/ Work Center II	)	Operatio Descripti			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Numbe	Insp. r Stamp
Draw Nbr		Revision Nbr										
D3953		С										
*100*					0.00				438	Ô		Jm13-4-28
Waterjet FLOW CNC Waterje	et		Dwg Rev: Prog Rev:	<u>C</u>	0.00			,	-47-G			
*110 *11 <b>0</b> *		QC2- Inspe	2-Deburr if to	necessary achine FAI/FAIB	0.00				<b>48</b>	^		Jm 13-4-28
QC			Memo		0.00	•						

Quality Control

										DQA:	Date	2:
NCR: Y	es / No				WORK ORDER NON-	CONFO	RN	MANCE / UPD	ATE	QA Closed	Date	2:
					DISPOSITION				AGAINST DE			
Work Orde	r:			<del></del>	Rework			Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	0.				Scrap Machining Small Fab					Pro	d. Eng. Coor.	Quality
					Use-as-is	Thermoforming Finishing Rec/Store/Packaging					· · · · · -	Other
NCR N	o				Work Order Update	Large Fab Composite Supplier						
Root				Descri	ption of work order update	Initia	ı	Actio	on	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief E	ng	Descri	ption	Date	Verification	QC Inspector
Doc/Data												
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etup												
Other									•			
Process												
Supplier												
Training							1					
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Landin	g Gear	*			General	_			·	7	_	_
	Bending				Bend	Gra				Ovalized	<u> </u>	Pressure/Forced
L	Centre No	ot Concei	ntric to (	o/s	BOM/Route	Hard	iswt	re		Over/Unde	<b>⊢</b>	Temperature/Cure
	Cracks				Broken/Damaged	<b>—</b> —		on incomplete	<u> </u>	Part Incorre	<del>-</del>	Weld
	Crushed/Crimped Burrs			Inst	ructi	ions Incomplete/U	nclear	Part Lost/M		Wrong Stock Pulled		
	Cuffs				Contamination .	☐ Mai	Maintenance			Part Moved		•
	Heat Trea	at			Countersink	Misl	abe	led	<u> </u>	Positioned Wrong		
	Inspectio	n Strip in	Tube		Cut Too Short	Misi	Misread			Power Loss,	'Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

Quality Control

										DQA:	Date	:
NCR: Y	es / No		٠		WORK ORDER NON-C	O	VFOR	MANCE / UP	DATE			
										QA Closed:	Date	:
Work Orde	ar.				DISPOSITION	ı			AGAINST DE	PARTMENT	/PROCESS	
WOIK Olde	-1.				Rework	! <b> </b>	Skid-tube Crosstube			]	Water Jet	Engineering
Part N	No.				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is	1	Thern	noforming	Finishing	Rec/Stor	re/Packaging	Other
NCR N	No	<u> </u>			Work Order Update	]		Large Fab	Composite	]	Supplier	
Root	<u> </u>	1		Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	ļ.	ief Eng		ription	Date	Verification	QC Inspector
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Equip/Tooling			1 1					!				
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Supplier			[ [									İ
Training												
Unapproved			<u> </u>									
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Landi	ng Gear			_	General		1			1	Г	٦, ,,
	Bending			_  _	Bend	$\vdash$	Grain			Ovalized	<b>-</b>	Pressure/Forced
_	Centre N	ot Conce	ntric to C	D/S	BOM/Route	<u> </u>	Hardwa		<u> </u>	Over/Under	<u> </u>	Temperature/Cure
	Cracks			-	Broken/Damaged	<u> </u>	4 '	ion Incomplete	<u> </u>	Part Incorred	<b>├</b>	Weld
	<b></b>	/Crimped		<u> </u>	Burrs	<u> </u>	4	ions Incomplete/	Unclear	Part Lost/Mi	L L	Wrong Stock Pulled
	Cuffs				Contamination	-	Mainte		<u> </u>	Part Moved	Vrang	
	Heat Tre			-	Countersink	$\vdash$	Mislabe			Positioned V		Other
		on Strip in	Tube	<u> </u>	Cut Too Short						Tottlet	
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	Torque Wayes in Extrusion   Drawing   Out of Calibration					Laubration						

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish Folio

Work O	rder ID	10040
April-22-13	1:03:37 PM	•

## \*400404\*

Dage 3

April-22-13 1:0	03:37 PM				14(14"						Page 3
Item ID: Revision ID:	D3953-21			Accept	*N900	<u>0401</u>	00	)* s	etup Start	*N	S1*
Item Name:	Gas Spring Br	acket							Stop	*N.	S2*
Start Date: Required Date: Reference:	4/22/13 : 5/03/13	<b>Start Qty:</b> 20.00 <b>Req'd Qty:</b> 20.00	*2( *2(	=	Cust Item I Customer:						
Approvals:	Process Pla	ın:	Date:	Tooling:	D:	ate:		R	lun Start	!//	R1*
	QC:		Date:	SPC (Y/N):	D:	ate:			Stop	*N	R2*
Sequence ID/ Work Center I	D	Operation Description Identify as per dwg & Sto	ock Location:	Set Up/ Run Hours	Tool ID		Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*150* Packaging Packaging		Memo		0.00				28x		)	8-5-7
160		QC21- Final Inspection -	- Work Order Release	0.00					(3	KA	
*160* QC Quality Control		Memo		0.00					1//		. <del>(()</del>

es/	/ No				WORK ORDER NON-C	ON	NFORM	MANCE / UPI	DATE	QA Closed:	Date	
					DISPOSITION				AGAINST DE	**		
Part No				Rework Scrap Use-as-is Work Order Update			Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite			· · ·	Engineering Quality Other	
	Date	Sten	Otv	i	•					Sign & Date	Verification	QC Inspector
					F	AUL	T CATE	GORY				
ng G	ear				General					_		
	Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in	Crimped at n Strip in 1 Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Hardwa Inspecti Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/U enance eled	Jnclear	Part Incorred Part Lost/Mi Part Moved Positioned W	st ssing //rong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	ng C	ng Gear Bending Centre Ne Cracks Crushed/ Cuffs Heat Trea	Date Step  Date Step  Date Step  Date Step  Date Step  Date Step  Date Step  Date Step  Date Step  Date Step  Date Step	Date Step Qty  Date Step Qty  Bending Centre Not Concentric to Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend	Date Step Oty  Date Step Oty  Descri  Date Step Oty  Descri  Control Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri  Date Step Oty  Descri Date Step Oty  Descri Date Step Oty  Descri Date Step Oty  Descri	Pr:	Pr:	DISPOSITION  Rework Scrap Use-as-is Work Order Update  Date Step Qty Description of work order update or Non-conformance  FAULT CATE  General  Bending Gear General  Bending Centre Not Concentric to O/S BOM/Route Hardwa Cracks Crushed/Crimped Burrs Instruct Cuffs Contamination Mainte Heat Treat Countersink Mislabe Inspection Strip in Tube Cut Too Short Misread Ripples in Bend  DISPOSITION  Rework Scrap Use-as-is Work Order update or Non-conformance  Initial Chief Eng  FAULT CATE  Rework Scrap Use-as-is Work Order update or Non-conformance  Initial Chief Eng  FAULT CATE  General  Bend Grain Hardwa Inspection Strip in Tube Countersink Mislabe Inspection Strip in Tube Cut Too Short Misread  Offset	Per:	DISPOSITION  Rework   Scrap   Wachining   Small Fab   Small Fab   Composite    Date   Step   Qty   Description of work order update   Initial   Action    Date   Step   Qty   Or Non-conformance   Chief Eng   Description    Date   Step   Qty   Description of work order update   Initial   Action    Date   Step   Qty   Description    Date   Step   Qty   Description    FAULT CATEGORY  Rework   Machining   Small Fab   Composite    Large Fab   Composite    Composite   Action    Description    FAULT CATEGORY  Rework   Skid-tube   Composite    Initial   Action    Chief Eng   Description    Bending   Grain    Hardware   Hardware    Inspection Incomplete   Instructions Incomplete    Cracks   Broken/Damaged   Instructions Incomplete    Crushed/Crimped   Burrs   Instructions Incomplete    Cuffs   Countersink   Maintenance    Inspection Strip in Tube   Countersink   Mislabeled    Inspection Strip in Tube   Cut Too Short   Misread    Offset   Offset    Drill Holes   Offset    Drill Holes   Offset    Documentary   Contamination    Misread   Offset    Drill Holes   Offset    Documentary   Contamination    Misread   Offset    Drill Holes   Offset    Documentary   Contamination    Misread   Offset    Drill Holes   Orfset    Drill	DISPOSITION  Rework Scrap Use-as-is Work Order Update Or Non-conformance  Date Step Qty Or Non-conformance  Bending Centre Not Concentric to O/S Cracks Broken/Damaged Centre Not Concentric to O/S Cracks Crushed/Crimped Burrs Instructions Incomplete Crushed/Crimped Burrs Contamination Maintenance Part Moved Inspection Strip in Tube Court Too Short Misread Power Loss/Striples in Bend Misread Power Loss/Striples in Bend Misread Power Loss/Striples in Bend Misread Power Loss/Striples in Bend Misread Power Loss/Striples in Bend Misread Power Loss/Striples in Bend Drill Holes Offset	DISPOSITION  Rework Scrap Use-as-is Work Order Update Date  Step Qty  Description of work order update Or Non-conformance  FAULT CATEGORY  General  Bending Centre Not Concentric to O/S Cracks Cracks Cracks Crushed Markining Small Fab Prod. Eng. Coor. Rec/Store/Packaging Supplier  Nork Order Update Or Non-conformance  FAULT CATEGORY  General  Bending Centre Not Concentric to O/S Cracks Cracks Cracks Crushed/Crimped Date  Burrs Instructions Incomplete Inspection Incomplete/Unclear Instructions Incomplete/Un

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

April-22-13 1:03:36 PM

Work Order ID:

100404

Parent Item:

D3953-21

Parent Item Name:

Gas Spring Bracket

**Start Date:** 4/22/13

Required Date: 5/03/13

**Start Qty: 20.00** 

Required Qty: 20.00

Comments: .

IPP RevA: new issue DD 09.11.30 verified by:EC 10.03.02 verified by:EC

IPP Rev:B as per dwg revC DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
<b>M304S11GA</b> 304/316 0.125 Sheet		Purchased	No			100	sf	199.0300	0.0144	<del>0.303</del> T58 O,≤		_Jm	13-4-98

<u>Location</u>	Loc Oty	Loc Code	
MAT020	199.03		
122521	24.93		
124445	174.1		124442

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-C	100	NFOR	MANCE / UP	DATE			
											QA Closed:	Date	•
Work Orde	er.					DISPOSITION	·			AGAINST DE	PARTMENT	/PROCESS	
Part No.				Scrap Machining Small Fa			Crosstube Small Fab Finishing	4	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other			
NCR I	No	<del></del>		<del></del>		Work Order Update	Work Order Update Large Fab Composite					Supplier	] []
Root	T			}	Descri	ption of work order update	l i	nitial	Ac	tion	Sign &		
Cause	1	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data		·											
Equip/Tooling													
Operator			ł										·
Material	Ш		ļ										
Setup	Ш		1									,	
Other													
Process	Ш			1									
Supplier	Ш												,
Training	Ш												
Unapproved					<u> </u>		<u> </u>						
			FAULT CATEGORY										
Landi	$\overline{}$				_	General		1			1		٦
	-	Bending				Bend	<u></u>	Grain			Ovalized	<b>-</b>	Pressure/Forced
	$\boldsymbol{\vdash}$	Centre No	ot Conce	ntric to	o/s	BOM/Route	<u></u>	Hardwa		<u> </u>	Over/Under	<u> </u>	Temperature/Cure
	Н	Cracks			<u> </u>	Broken/Damaged	-	1 .	on Incomplete		Part Incorre	<u> </u>	Weld
	$\vdash$	Crushed/	Crimped		<u> </u>	Burrs	_	4	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	$\vdash$	Cuffs		Contamination			_	Mainte		<u> </u>	Part Moved		
	Heat Treat Countersink			<u></u>	Mislabe			Positioned V		٦			
	$\vdash$	Inspection		Tube		Cut Too Short	$\vdash$	Misread	ı		Power Loss/	Surge	Other
	Ш	Ripples in	Bend			Drill Holes	-	Offset					
		Torque W	laves in l	Extrusio	in	Drawing	1.	Out of Calibration					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish Folio

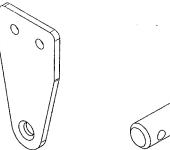
DART AEROSPACE LTD	Work Order:	100404
Description: Gas Spring Bracket	Part Number:	D3953-21
Inspection Dwg: D3953 Rev: C		Page 1 of 1

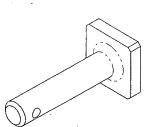
### FIRST ARTICLE INSPECTION CHECKLIST

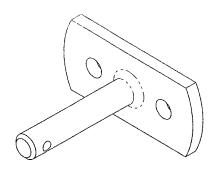
Drawing		Actual	_		Method of	
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
Ø0.194	+0.005/-0.001	0194"	_		V	Jkmor
Ø0.257	+0.006/-0.001	0.357	-		٧	
0.625	+/-0.010	0.625	_		V	
1.38	+/-0.030	1.383			V	
0.38	+/-0.010	0.381"	~		V	
0.375	+/-0.010	0.380"	_		٧	
1.00 عبران	+/-0.030	1.00"	1		7.0	
1.500	+/-0.010	1.506"			, <b>V</b>	
0.125	+/-0.010	0.117°			, V	
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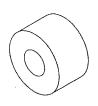
<b>9</b>	<u></u>
Measured by: Jm Audited by: 2	Preliminary Approval:
Date: 134-25. Date: 13.4	09 Date:

Rev	Date	Change	Revised by	pproved
Α	10.06.07	New Issue	KI (I)	M











D3953-1 GAS SPRING BRACKET

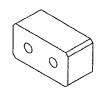
D3953-3 GAS SPRING STUD, LID

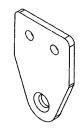
**D3953-5 GAS SPRING STUD, BASE** 

D3953-7 GAS SPRING SPACER

D3953-9 GAS SPRING WASHER











**D3953-11 GAS SPRING SPACER** 

D3953-13 GAS SPRING SPACER (FULL LID)

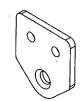
D3953-15 GAS SPRING BRACKET (SPLIT LID)

D3953-17 GAS SPRING SPACER (SPLIT LID)

DATE

10.01.29

D3953-19 GAS SPRING BRACKET (SQUARE BASKET)



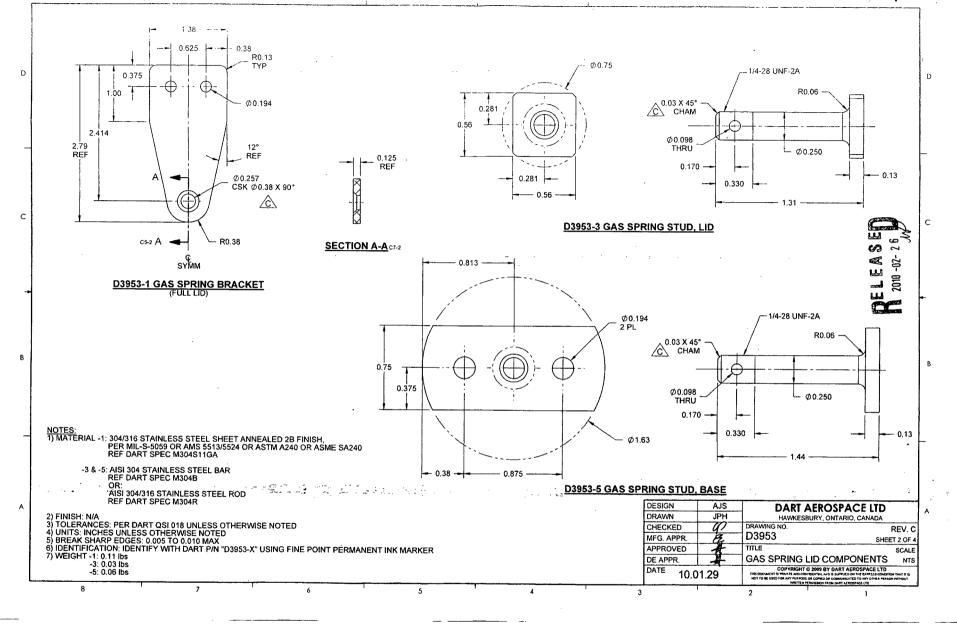
D3953-21 GAS SPRING BRACKET (SQUARE BASKET)

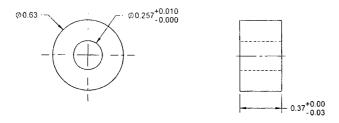
<u>⟨</u>c⟩

				<u> </u>		
С	PARTS -19 & -21 ADDED (SHT 1& 4); CSK CALLOUT WAS CHAM (C6-2, B6-3, C6-4); © SYMM WAS © SYM ABOUT (C7-2, C7-4); SECTION C-C REPOSITIONED TO B2-4 REASON: ADDL PARTS REQD; DRAFTING ERRORS					10.01.29
В	SHEET 3 ZONE C1. DIM 0.05 MIN WAS 0.13, MULTIPLE DIMENSIONS MINMAX REMOVED TO LERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY.  09.11.11					
Α	NEWIS	NEW ISSUE .			AJS	09.07.27
REV.	V. DESCRIPTION -			BY	DATE	
DESIG	DESIGN AJS		DA	RT AEROSPA	CEL	ID
DRAW	N	JPH	1	KESBURY, ONTAR		
CHECK	ED	a	DRAWING NO.			REV. C
MFG, A	PPR.	E.	D3953			SHEET 1 OF 4
APPRO	VED	4.	TITLE			SCALE
DE APPR.		#	GAS SPRI	NG LID COMP	ONEN	TS NTS

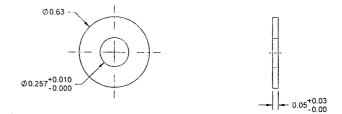
13-04-23

100404 MLS

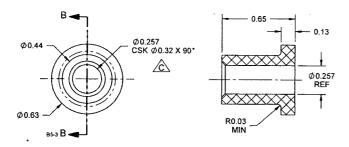




#### **D3953-7 GAS SPRING SPACER**

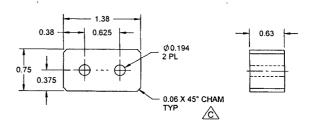


#### **D3953-9 GAS SPRING WASHER**



**D3953-11 GAS SPRING SPACER** 

SECTION B-B 87-3



#### **D3953-13 GAS SPRING SPACER**

	***				
DESIGN	AJS	DART AEROSPAC	E LTD		
DRAWN JPH		HAWKESBURY, ONTARIO, CANADA			
CHECKED	a	DRAWING NO.	REV. C		
MFG. APPR.	E,	□ D3953	SHEET 3 OF 4		
APPROVED	-	TITLE	SCALE		
DE APPR.	#	GAS SPRING LID COMPONENTS NTS			
DATE 10.0	1.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD THE DOCUMENT AND CONFIDENTIA, AND IS SUPPLED ON THE EXPRESS CONTINUENT OF THE MOTOR WITHOUT OF THE PRESENT WITHOUT OF THE PRESENT WITHOUT OF THE PRESENT WITHOUT TO THE PRESENT WITHOUT THE PRESENT WITH WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT WITH WITHOUT THE PRESENT WITHOUT THE PRESENT WITHOUT THE PRESENT W			

# NOTES: 1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK REF DART SPEC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -7/-9/-11: < 0.01 lbs EACH
-13: 0.17 lbs

